

ON THE
MAINTENANCE OF HEALTH

LOWNDES

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MAINTENANCE OF HEALTH.



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AN ESSAY

ON THE

MAINTENANCE OF HEALTH.

BY

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“ O why doe wretched men so much desire
To draw their dayes unto the utmost date,
And do not rather wish them soone expire,
Knowing the miserie of their estate
And thousand perils which them still awate,
Tossing them like a boate amid the mayne,
That every houre they knocke at Deathe's Gate?
And he that happie seems and least in payne
Yet is as nigh his end as he that most doth playne.”
SPENSER.

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P R E F A C E.

ONE that travelled before me in pleasant medicinal paths, one Peter Lowe, surgeon, of Glasgow, in 1612 dedicated a work on chyrurgery to James Hamilton, Earl of Abercorn, trusting that "his lordship would accept in good part (even as Minerva harboureth her owl under the target, Citherea the deformed Cyclops in her lovely bosom, and Apollo the night raven under the heavenly lute) his painful travels." Now, I believe dedications are not required, and the author now-a-days, instead of coming timidly into the arena under the sheltering shadow of some august name, dons sword and shield, and marches in, and dares all comers.

Some, however, still look askance, and would not, they say, have intruded on the public were it not that they felt the

public good demanded it. No love of notoriety, much less of pelf, impels them, and if their feeble efforts only succeed in saving one life, in cheering one gloomy soul, in wiping away one tear, or in implanting one new idea, they will be more than repaid.

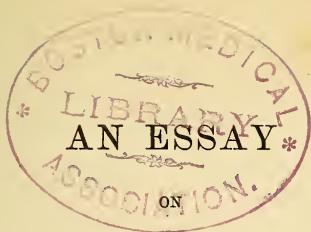
These also I decline to imitate. Perhaps I do love notoriety, perhaps pelf, perhaps I think I can instruct or amuse. Few acts arise from motives that are unmixed or even that we can analyze. Nor can, in the present instance, these motives interest very much the reader. I shall, therefore, venture respectfully to submit this little work to the public without explanation and without apology.

Much of the matter contained in these pages was included in an address I had the honour to read before the Liverpool Medical Institution on the opening of their Session, 1865-6.

LIVERPOOL, July 1867.

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THE MAINTENANCE OF HEALTH.

CHAPTER I.

HEALTH.

WHAT is health? It is a state of well-being of the body and mind. It has been well said that it is a condition in which we may often forget we are made up of flesh, and blood, and nerves, in which we are free from those aches and twinges that make us too painfully aware of our anatomy. Our machinery is working smoothly; we can take physical exercise without undue exhaustion, and our mental faculties are unclouded, and we feel a sense of pleasure in life. Spenser thus conjoins health and joy :—

“ But Life was like a faire young lusty boy,
Such as they faine Dan Cupid to have beene :
Full of delightful health and lively joy,
Deckt all with flowers, and wings of gold fit to
employ.”

In health we enjoy food ; the appetite may indeed be almost painfully keen. A man went to Al-Yehúdí-Maserjawaih, a celebrated Jewish physician who lived in the first century, and said to him, “ I am troubled with a disease such as no one else has ever suffered.” Upon being asked the nature of his illness, he replied, “ When I get up in the morning my sight is dim, and I feel as if a dog were gnawing my stomach ; this state continues till I eat something, after which it ceases until noonday ; then this same feeling returns, and after eating something, it ceases until the time of evening prayers ; it then returns again, and I can find no remedy for it except eating.” Then said Maserjawaih, “ Truly, this disease of thine must be hateful unto God, seeing

that he hath chosen so base a man upon whom to bestow it! Oh, that this disease might be transferred to me and my children, and I would give in return for it the half of all I possess!" The man replied, "I understand thee not." And Maserjaiwaih said to him, "This is *health* which thou dost not deserve to possess. Would to God that it might be taken away from thee and given to one who is more worthy of it."*

In health our sleep is sound, but light and refreshing, as Milton paints that of our first parent:

"Now Morn, her rosy steps in the eastern clime
Advancing, sow'd the earth with orient pearl,
When Adam waked, so custom'd; for his sleep
Was very light, from pure digestion bred,
And temperate vapours bland, which the only sound
Of leaves and running rills, Aurora's fan,
Lightly dispersed, and the shrill matin songs
Of birds on every bough——"

* See notes to the Sydenham Society's translation of the works of Abú Bec Mohammed Ibn Zacariya Arráyí, or Rhazes.

The temper in health is sweet and good, except in those in whom an unpropitious Nature has implanted a temper really bad; for this no bloom of health can cure, though want of health may exasperate it.

In health the flesh is firm, the muscles are strong; and though we be not all gymnasts, nor harlequins, nor morris dancers, nor like the lady in Germany,* who was said to have danced for a month without rest, yet we can go through our accustomed work and exercise, and that with enjoyment, and not feel the grasshopper a burden to us.

I need not expatiate on the advantages and pleasures of health. To the great mass of the world it means to be able, without pain, to earn their daily bread and to enjoy their homely comforts and those charms of external nature that are

* The dance she performed was the involuntary "Chorea Sancti Viti."

common to all. To the rich their wealth is an empty dream, and their state a weary drag, if "scrofula, madness, or gout," or other disease be present ever like a grim spectre. Then their parks are wildernesses to them, and their gardens like that of Proserpina,

"There mournful cypress grew in greatest store,
And trees of bitter gall, and heben sad,
Dead sleeping poppy, and black hellebore,
Cold colocintida, and tetra mad,
Mortal samnitis, and cicuta bad;
Which with th' unjust Athenians made to dy,
Wise Socrates, who thereof quaffing glad,
Poured out his life and last philosophy
To the fayre Critias, his dearest belamy."*

If we would preserve this boon of health, there are certain matters we must pay due attention to, and among these we find the regulation of diet, the management of the skin, exercise and aeration, sleep, and the maintenance of a healthy tone of mind.

* Spenser's "Faery Queen," book 2, canto 7.

Longfellow observes that

“Joy and temperance and repose,
Slam the door on the doctor’s nose.”

And Shakspeare says—

“Our foster-nurse of nature is repose.”

And again, as to the influence of the
mind on the body—

“Tell me, sweet lord, what is’t that takes from thee
Thy stomach, pleasure, and thy golden sleep?”

* * * * *

Why hast thou lost the fresh blood in thy cheeks?”

In the following chapters I will go into
these several matters, yet I will be brief.

CHAPTER II.

DIET.

THE subject of diet is so large that I cannot attempt in this little essay to do more than refer to some general principles that seem of importance.

First then of food as nourishment. We are always undergoing change:

“ And men themselves do change continually
 From youth to eld, from wealth to poverty,
 From good to bad, from bad to worst of all;
 Ne doe their bodies only flit and fly,
 But eke their minds (which they immortal call)
 Still change and vary thoughts as new occasions
 fall.”*

Our bodily frames are evermore wearing out, and evermore till weary eld being thoroughly renewed. Portions of

* “ Faery Queen,” canto 7.

tissue, of brain substance, of muscle, of nerve, of skin, of the whole body, are continually perishing, and the dead portions are removed in various ways from the body, while their places are taken by new tissue. This new tissue is formed from the food we take.

It is obvious that when once the body has reached its full development in manhood, the quantity and quality of the food should be regulated by the demand made by the wear and tear of the body. If, for instance, a person, already sufficiently stout, is growing fatter and fatter, he is taking more fattening food than is necessary or safe, and must restrict himself. So if a person free from disease is getting too thin, he must try to make such a change in his diet or mode of living as may stop his growing thin, as it is obvious the supply of fattening food taken is not enough to meet the demands made by the wear and tear of the body.

Let us next for a moment consider food in its capacity of fuel. In respiration we inhale, of course, atmospheric air; what we exhale contains a large quantity of carbonic acid. This is derived partly from the food we take, partly from worn out and effete tissues. The quantity of carbonic acid exhaled is largely increased by a cold atmosphere, by exercise, and by the act of taking food.

The chemical changes that are always taking place in the lungs and in other parts of the body are supposed to maintain the uniform temperature of the body.

In cold weather, then, we must take care that a full supply of carbonaceous food be taken, that active respiration may be kept up without the tissues being too much called upon to contribute the necessary carbonic acid.

I believe that vast numbers of well-to-do people around us eat and drink far too much for their health, and that particu-

larly in the summer time. The ancients paid great attention to the effect of season on the frame and to the regimen suitable to each season; thus in Paulus Ægineta* we find "It is proper to regulate the diet with a view to the season. In winter to take more fatigue and eat more than usual, if the state of the wind be northerly; but if it be southerly to take the same fatigue, but to use less food and drink. In fine, to make the body dry in the wet season and warmer in the cold, to eat also warm flesh and acrid pot-herbs, and drink more wine than usual. In the beginning of spring some may evacuate by emetics and others by laxatives, and another may get a vein opened, according as habit or inclination directs. Rest is suitable to the season of summer, and also a diminution of labour and food; the food also ought to be more cooling

* "Paulus Ægineta," Sydenham Society's Transactions, Section 53.

and the drink abundant, and in short everything ought to be done which can contribute to cooling and dilution.” “Hippocrates and Galen lay it down as a general rule that the fullest diet is most proper in winter, and the sparest in summer.”

If the same quantity of saccharine and fatty food that is necessary for keeping up the animal heat in winter be taken also in spring and summer, when respiration is much less active, much must be left unconsumed, and cause either plethora and ultimately obesity, or what are called bilious attacks and diarrhœa, a tendency to inflammatory attacks, and general ill health. A far less common error consists in living too low in winter; and the pale and shivering aspect of those to whom necessity prescribes an insufficient diet shows what it is to have a demand in the shape of a keen oxygenating air, and no supplies to meet it. We can easily

imagine how ill the feasting we indulge in at Christmas would make us if we were to have it at Midsummer instead.

Bantingism flashed upon a delighted world of stout men as a new science, yet the ancient physicians studied very carefully both the way to fatten the body and the way to reduce it. Celsus gives the following list of things that fatten,—moderate bodily exercise, much rest, anointing, and, if it be taken after a meal, the bath, a costive habit, moderate cold in winter, plenty of sleep, but not too much, a soft bed, an easy mind, the meat and drink of as fat and sweet a nature as possible, food frequently taken and as much in quantity as can be digested. Among things that make thin he mentions the warm bath, and especially the salt water bath, and these taken on an empty stomach, a hot sun and heat of any kind, anxiety, watching, sleep either too short or too prolonged, the earth for a

couch in summer, a hard bed in winter, racing, great walking, and all violent exercise, the use of emetics, of purgatives, and of things of an acid and dry nature.

Thus it was known before the time of our modern sage that fatty and saccharine substances tend to produce corpulency; so that the principal merit in Bantingism would seem to be the proscription of substances containing starch, which is supposed to be changed in the system into saccharine matter. Experience and observation, however, seem to have placed the ancient on a par with our modern chemists and philosophers; and we find it mentioned in Dr. Adam's interesting commentary on Paulus Ægineta that Haly Abbas as well as Rhazes both expressly recommend bread taken frequently, in addition to fat meat, as a means of fattening those that are emaciated.

If the nature of the diet were alone to be considered, we should expect to find our agricultural labourers troubled with corpulency; for bread, cheese, and beer are all supposed to bring on that affliction; but the reducing effect of their laborious exercise, hard beds, short slumbers, &c., show us how much more philosophical the ancients were in considering this question in all its aspects. Another point of interest is the regimen to be observed at different ages; and here I cannot do better than quote the remarks of Paulus Ægineta,* founded principally on the teachings of Galen:—"Infants and children, when weaned from milk, are to be allowed to live merrily and without restraint; their food ought to be light and their exercise gentle. After six or seven years of age both boys and girls are to be consigned over to school-

* "Paulus Ægineta" (Sydenham Society), book 1, section 14.

masters of a mild and benevolent disposition; as such persons will impart instruction to them in a cheerful manner and without constraint; for relaxation of the mind contributes much to the growth of the body. Boys twelve years of age should go to teachers of grammar and geometry, and get their bodies hardened by gymnastic exercises. From fourteen to twenty their proper exercises will be the study of mathematics and initiation into philosophy. At the same time, however, it will be proper to use more exercise for strengthening the body. They ought likewise to be restricted as to wine. To adults the fullest supply of nourishment both as to body and mind ought to be allowed, wherefore they should use all kinds of gymnastic exercises, particularly such as each has been accustomed to, and food which is sufficient and nutritious. In the decline of life, both the bodily and mental supply

ought to be abridged; and the gymnastic exercises diminished in proportion. The food also is to be gradually lessened as the habit begins to contract the frigidity of age."

Dr. Edward Smith's valuable work on "Cyclical Changes" goes pretty fully into this subject, and indeed is full of interesting information as to the principles of health in general.

Great temperance in eating and drinking, so that we may keep the body from emaciation, and supply the lungs with matter for respiration, without filling the body with noxious superfluities or burdening it with fat, seems the great thing to be observed in diet; and to this we may add, that variety in food and drink seems very beneficial.

I shall just briefly consider the use of wine and other stimulants, and then say a few words as to Teetotalism.

With regard to the use of stimulants,

my limited observation and experience have led me to the conclusion that they are almost essential to the maintenance of good health and energy, at least in large towns. Wine refreshes and invigorates the mind and raises the spirits, it stimulates the circulation and gives a healthy colour to the complexion, it promotes digestion and gives tone to the nervous system. Our ordinary port and sherry are very heating and not fit for general use in summer, but valuable in cold damp weather. The light wines that are now so much pressed upon our notice are very useful summer beverages; but I cannot help thinking they are a little too much praised at the expense of those refreshing bitter ales for which this country is so justly celebrated. I saw from a quotation somewhere the other day, that in Queen Elizabeth's time a great foreign ambassador was much struck with the fine clear ale that he

found here, and it at least has not degenerated.

If we had had the misfortune to live in heathen times, our great brewers, Bass, Guinness, &c., would have become divinities, rivals of Bacchus, and would have been celebrated in dance and song. The light bitter ales in summer, and the mild and stronger brews in winter, are most refreshing and strength-supporting beverages, and hardly intoxicating unless taken in unreasonable quantities. In summer light dry wines are suitable for the fat, ale and porter for the lean.

We have frequent opportunities of observing that class of people that are called Teetotallers. Their amiable intentions command our respect, though we regret they cannot see the value of the golden mean. They are apt to set themselves up as lights in an evil world, and they must pardon us if we venture to scrutinise them closely before we follow whither

they would lead. As a general rule, I think, we find them in early life great eaters, insatiable devourers, then dyspeptic, languid, low spirited. Those useful ministers, the teeth, they often lose very early. They are often excitable, easily amused, easily depressed. They are often pale, and their flesh soft and relaxed; they want the colour and bloom of health. They are deficient in tone. Among the poorer classes I have seen the houses of teetotallers almost as wretched as those of the intemperate, not that they have not good intentions, but they want energy, and are indolent and ruminant. We see many remarkable exceptions, but these are among people of naturally vigorous constitution, who have lived much in the country and under circumstances most favourable to health.

Of their mental condition we can judge by the modes by which they strive to bring others to their own way of think-

ing. They are constantly crying out for something happily unintelligible to others, "The Permissive Bill," "The Maine Law," "The whole Bill," "The Alliance," &c. And they delude the most hopeless children into their "Bands of Hope." They are extremely conciliating to their opponents; but their idea of conciliation is that of Hood's sturdy butcher, who was advised to try conciliation towards an obstinate flock of sheep:—

"Stringing his nerves like flint,
The sturdy butcher seized upon the hint,—
At least he seized upon the foremost wether,
And hugg'd and lugg'd and tugg'd him neck and crop,
Just *nolens volens* through the open shop ;
If tails came off, he did not care a feather.
Then walking to the door, and smiling grim,
He rubb'd his forehead and his sleeve together—
'There!—I've conciliated him!'"

However, we need not trouble ourselves much about the noisy demonstrations of the teetotallers, because, as a great journal lately suggested, they will never show any dangerous vigour in their agitation,

or power in their arguments, until they recruit their faculties with a little of that refreshing stimulant they so much abhor.

I must, however, confess my conscience doth somewhat smite me that I mock at all, however good naturedly it be intended, these well-meaning people. I think their practice is opposed alike to the teachings of physiology and experience as regards the inhabitants of great towns. Those who have the happiness to live in open, airy situations in the country, however, free from the emanations of sewers and the foulness of atmosphere that a crowded populace engender, require, I believe, very little, if any, alcoholic stimulants, and may have clearer minds and less risk of losing their self-control than we who, to live in health at all, must have recourse to a certain amount of artificial support.

The French author of a recent trea-

tise on wines prefaces his book by saying "he pities water drinkers—drunkards he blames." The evils of intemperance are unhappily too conspicuous to require notice. Eloquent denunciations of the vice are not wanting. I have more hopes from the example of the temperate and the gradual progress of civilization, than from precept, or attempt at compulsory prevention. They will to it again.

I may perhaps just be allowed to quote Spenser's lines, painting those that had been transformed into brutes by enchantment as unwilling to take their true shapes again, for such indeed seems the condition of drunkards. They liked not the meddling of the Palmer and Sir Guyon.

"Streightway he with his virtuous staffe them strooke,
And streight of beastes they comely man became;
Yet being man they did unmanly looke.

* * * *

But one above the rest in speciall,
That had an hog been late, hight Gryll by name,

Repyned greatly, and did him miscall,
That had from hoggish form him brought to
naturall.

Saide Guyon, 'See the mind of beastly man !
That hath so soon forgot the excellence
Of his creation, when he life began,
That now he chooseth with vile difference
To be a beast, and lacke intelligence.'
To whom the palmer thus 'the donghill kinde
Delights in filth and foul incontinence,
Let Gryll be Gryll and have his hoggish minde
But let us hence depart whilst wether serves and
winde.' "

If the use of spirits was reserved, as
I think it well might be, for medicinal
purposes, intemperance would probably
be comparatively rare.

CHAPTER III.

THE CARE OF THE SKIN.—ABLUTION,
BATHING, ETC.

THE skin is not only a tegument or covering to the body, and a principal seat of the sense of touch, but it has another important function, that of helping to remove superfluous moisture and also effete particles, or portions of tissue that have played their part and are to be removed from the system. As a tegument it is no doubt the most ancient of coverings, and many savage tribes in warmer climates are still content with it, and feel, no doubt, "when unadorned adorned the most." With us fashion, feelings of propriety, climate, and I know not what, have led to the use of artificial

outer skin, the fashioning of which has become, curiously enough, to many the main end of their being.

King Lear, accustomed to the adornments of a court, was evidently much impressed by seeing poor Tom very barely clad: "Is man no more than this? Consider him well: thou owest the worm no silk, the beast no hide, the sheep no wool, the cat no perfume: ha! there's three of us sophisticated! Thou art the king!"

The outer skin or clothing in our variable climate must be regulated by the season and weather, and warm clothes in summer and light clothing in winter must be alike injurious.

Let us now consider the skin as the medium of perspiration. There are said to be about seven million* little pores in the skin, each the orifice of a little crooked

* Dr. Carpenter's "Physiology," chapter ix.

duct, that brings up the sweat from little bodies called sudoriparous glandules that lie beneath the skin. These little ducts all over the body, if straightened out, would extend about twenty miles; it is therefore obvious that the little orifices to such a tunnelling should be kept free. Much of the perspiration is given off from the body in a state of vapour, but some collects about the little orifices and becomes mixed with other greasy matter, that is given off also by the skin. This perspiratory and other matter, if left on the surface too long, decomposes, and not only tends to choke up these little ducts, and so prevent noxious matter being removed from the system, but also becomes itself an actual poison, and may be to some extent reabsorbed into the system.

The experience of ages has sanctioned the use of soap to cleanse the surface of the body. As a rule, I believe the whole body ought to be washed with soap every

day, certainly not less often than every other day. The hands and face, which rapidly become much dirtier, partly from the greater activity of the skin in those parts, partly from external smoke, dust, &c., must be washed much more frequently, to keep their pores open. Dr. Carpenter says "There can be no doubt whatever that imperfect action of the cutaneous glandulæ, consequent upon inactive habits of life and want of ablution, is a very frequent source of disorders of the general system, occasioning the accumulation of that decomposing organic matter in the blood, which it is the special office of these glandulæ to eliminate."*

Granted the soap, is the water to be cold or hot?

Considering that the skin acts still to some extent as a tegument, cold water

* Dr. Carpenter's "Physiology," chapter ix.

is to be preferred as bracing the skin and hardening it, and making it less liable to be chilled by sudden changes of weather. As to the warm bath, it may be necessary occasionally for some temperaments, but Turkish baths, packings, &c., though they may be essential in some forms of ill-health, yet are violences that the healthy may as well eschew. Sea-bathing is, to those it suits, I need not say, a most valuable source of health.

I have used the term "violence," and I think if it is very bad, by neglect of ablution, to allow these little sweat ducts to be choked, it is also bad by violent means, such as shampooing, hot air, &c., to empty them at once instead of allowing them gradually to bring their charge to the surface. Such a proceeding allows the operator to show his skill by bringing great quantities of perspiration to the surface, but must, I think, somewhat shake and disturb these little vital canals

in the regular performance of their daily task.

I speak of a state of health. In many diseases where it is necessary to, as it were, bleed or dose through the medium of the skin, it is another matter.

A rub, however, with a rough towel is good, to bring on moderate reaction after washing with cold water.

The value of careful washing will be neutralized unless the under-garments be very frequently changed.

CHAPTER IV.

AERATION AND EXERCISE.

“WITHOUT air and motion,” says an old writer, “no creature can thrive, even plants grow arid and die; the humble violet, as well as the lofty oak, delights to be agitated by the winds.”

Exercise produces its beneficial effects in two ways; it hardens the body and strengthens the muscles, and it also purifies the blood by making the respiration more active. One of the functions of the lungs in respiration, I need hardly again say, is by a sort of combustive process to maintain the heat of the body at a uniform standard; another is to remove noxious matter from the system. The principal result of the decay and death of

tissue, before alluded to, is the formation of carbonic acid. The blood in the veins becomes charged with this carbonic acid and other impurities, and in the course of circulation passes through the lungs, where it becomes exposed to the air; it now yields up to the air its carbonic acid and other impurities, and absorbs from the air oxygen, which refreshes and regenerates the blood, and through it all the tissues.

That this process may take place effectually, it is evident that the respiration should be sufficiently active, and that the air should be pure. The carbonic acid will not be sufficiently removed if we are breathing an atmosphere that already contains much carbonic acid, or that does not contain enough oxygen.

The air of large towns is always to some extent impure, from the exhalations from the lungs and bodies of so many living creatures, and from the emanations

from the sewers which will not submit to be pent up in their subterranean caverns. The air of the rooms we sit in cannot by any possibility be better than that in the streets, and is generally tenfold worse.

The more impure the air is the less active is our respiration, for pure air is the natural stimulus to the respiratory movement, so that in a bad atmosphere we do not breathe strongly enough, where only a greater consumption of air could at all compensate for its want of purifying properties.

It is true that our frame may become habituated to an impure atmosphere, and many live in town even an in-door life and live long; but without plenty of pure air we cannot enjoy really strong health, and children born in towns, and more particularly the children of those who have always lived in towns, often show signs of imperfect development, of degeneration of type, and early decay. As Burton says on another subject, "Our fathers

bad, and we are like to be worse," and our children after us worse still.

What is to be done then? If these things be true, and reason and observation both vouch for them, how is this evil to be remedied? It can only be palliated.

Those who can should live out of town, at least while their children are growing up.

Those who live in towns should take every opportunity of getting into the pure air of the country. The sea air is particularly stimulating to the lungs, and a frequent trip to some watering place is a great source of health, and on these occasions we should expose ourselves to the air as much and for as long as possible.

We hardly want physiology to prompt us to do what nature invites, but when the excursionist feels the glow on his cheek after a brisk walk by the sea, and feels his limbs firm and elastic, he may consider with satisfaction that he is puri-

fyng his blood and renewing his system, and doing good to that body which is, no less than his mind, entrusted to his charge.

On this point of aeration by exposure to the pure air I feel I cannot enough insist. The "vital air" it is truly called; deprived of it we soon perish; furnished with too limited a supply of it we soon depart from the standard of health, decay and degenerate.

Plenty of sunlight is as essential to the health and beauty of the human race as it is to the flourishing of the flower of the field. We hear of the chemical rays that emanate from the sun, but may there not be some more subtle agency still—vital, health-giving beams that the god of day imparts? I believe it is good to be out in the rain even. It is not the getting wet that does harm, but the getting chilled by sitting in wet clothes afterwards—a thing generally easily avoided. The air during

rain often seems particularly pure and fresh, and we can easily suppose that the rain as it comes down brings with it a great deal of unpolluted air from the higher regions.

Nor should we too much shun either heat or cold, for the alternations are good. Nature herself said*—

“I well consider all that ye have said,
And find that all things stedfastnes doe hate,
And changed be; yet being rightly wayd,
They are not changed from their first estate,
But by their change their being doe dilate,
And turning to themselves at length again
Do work their own perfection so by fate.”

By frequent exposure to the air we soon, if we are healthy, bear readily all changes of temperature.

Exercise, then, active or passive, in the open air, is invaluable as aerating the body by means of the lungs and the skin. Active exercise is also directly useful as

* Spenser, “Faery Queen.”

serving to strengthen all the muscles of the body, as well as to promote digestion, and the healthy action of the whole alimentary canal.

The ancients paid great attention to the subject of exercise. Galen and Hippocrates, and also Celsus, treat fully of it.

Paulus Ægineta * says :—"Exercise is a violent motion. The limit to its violence should be a hurried respiration. Exercise renders the organs of the body hardy, and fit for their functional actions. It makes the absorption of food stronger, and expedites its assimilation; and it improves nutrition by increasing heat. It also clears the pores of the skin and evacuates superfluities by the strong movements of the lungs. Since, therefore, it contributes to distribution, care ought to be taken that neither the

* "Paulus Ægineta," translated for the Sydenham Society by Dr. Francis Adams. A highly interesting and valuable treatise. Book i. sect. 16.

stomach nor the bowels be loaded with crude and indigestible food or liquids; for there is a danger lest they should be carried to all parts of the body before they be properly digested. It is clear, then, that exercise ought to be taken before eating." He means that it is after the digestion of a preceding meal that exercise will do the most good.

Celsus says that inasmuch as slothfulness weakens the body, whereas exercise strengthens it, the one brings premature old age, whilst the other prolongs our youth.* The muscles of our frame require frequent use to keep them in a state of full development and tone. If they are too little used they undergo changes in substance that make them unfit for their functions.

Those exercises should be preferred that are practised in the open air, that

* "Celsus de Medecinâ." Lib. i. cap. 1.

bring into play the whole or greater part of the body, and in which the mind is occupied and amused. Hunting has been in all times renowned as a most healthy and inspiring exercise. Swimming also is very useful, and calls into play the whole frame. Running, and all our well-known capital out-door games and exercises for the young, especially cricket. For the older and graver, brisk walking, quoits, and the ancient and scientific game of bowls.

With regard to walking, which is of course the kind of exercise most generally available, a great authority in pedestrianism* says, with a natural enthusiasm and a slight contempt for the niceties of language :—"There is no finer sight among the long catalogue of British sports, more exhilarating and amusing to the true

* "Training for Running, Walking, Rowing, and Boxing." By Charles Westhall, the Pedestrian Champion of England.

sportsman, than to see a walking-match carried out to the strict letter of the meaning, each moving with the grandest action of which the human frame is capable, at a pace which the feeble frame and mind is totally unable to comprehend, and must be witnessed to be believed." He goes on to tell us how to walk. "To be a good and fair walker, according to the recognised rule among the modern school, the attitude should be upright or nearly so, with the shoulders well back, and the arms, when in motion, held well in a bent position, and at every stride swing, with the movements of the legs, well across the chest, which should be well thrown out. The loins should be slack, to give plenty of freedom to the hips, and the leg perfectly straight, thrown out from the hip boldly, directly in front of the body, and allowed to reach the ground with the heel being decidedly the first portion of the foot to meet it. The

movement of the arms, as above directed, will keep the balance of the body, and bring the other leg from the ground; when, the same conduct being pursued, the tyro will have accomplished the principal and most difficult portion of his rudiments." He that reads may run, or at least walk, with speed and elegance. We neglect sadly this gift of walking. Which of us keeps his shoulders well back when he walks, his arms swinging grandly across his chest, and his loins slack? I roll to and fro with a short, uneasy motion; this one has a stooping, that an ambling, another a shambling gait. Of this we may be sure, that rapid walking in good style is a magnificent exercise; and Mr. Westhall makes it the grand basis in "training" or bringing the body into good condition for feats of strength or speed.

In large towns where pleasant outdoor exercise is difficult to obtain, gymna-

siums have been built, with a view of keeping up the muscular development of the citizens. Some of the more gentle exercises here taught are very good, such as swinging, wielding light clubs or dumb bells, swarming up ropes, climbing ladders, &c.—but they become wearisome from monotony. The human being has not the same delight, nor indeed the same object, in climbing as the monkey.

The violent exercises with heavy clubs or dumb-bells, lifting heavy weights, &c. are, I believe, particularly injurious, except to the very strong. The heart is subjected to a sudden and violent strain, and it with the great blood-vessels may suffer from the tension and subsequent relaxation. None ought to indulge in these pastimes of giants but those who have the thews and sinews of Anakim.

Fencing and boxing are both of them valuable and beautiful exercises. They occupy and amuse the mind, quicken all

the senses, give resolution and self-confidence, and strengthen the whole bodily frame.

Billiards afford us an admirable mode of exercising the whole body as well as a fascinating recreation.

There is a mode of exercise recommended by some of the ancients, who call it "vociferation." Its object is to strengthen and expand the lungs and to improve the vital heat.* Paulus Ægineta says, "In the exercise of the voice, regular and gentle modulation can contribute nothing to health, (?) but the utterance of louder tones is beneficial, and is therefore to be practised." Plutarch commends vociferation; Aetius praises it as an exercise of the chest and the organs of speech. Avicenna says also that it exercises the parts above the mouth and chest, and hence that it improves the

* See "Paulus Ægineta." Vol. i. pp. 29, 30.

complexion. In practising it we are to begin to talk in a moderate manner, then strain the voice gradually, and afterwards to allow it to sink by degrees.*

An objection to this valuable exercise is, that loud talking is apt to become a habit, and so might add to the many troubles of this already unquiet world.

This form of exercise is still much in vogue (I know not with what effect as regards health) in Town Councils, Vestries, Meeting Houses, Lunatic Asylums, and Fish Markets. Vociferation is not to be practised by females,

“Her voice was ever soft,
Gentle, and low; an excellent thing in woman.”

Singing is the obvious substitute.

Training.—There is a certain plan of diet and exercise which is found to bring the body into such a condition that the

* These extracts are also to be found in the translation just quoted.

most violent or long-continued exertion can be made with impunity, and it is worth considering whether every man who has not fallen into the sere and yellow leaf might not with advantage from time to time make trial of this plan or of some modification of it. At any rate it affords so many useful hints that I shall be pardoned if I make this chapter longer than I had intended by giving a short outline of what training means.

In training, as in so many other things, it is interesting to know that a revolution has taken place in the last few years. The old method of training seems to have consisted of nothing but "physicking-work and sweating, changed with sweating-work and physicking;"* for if "a man had entered into an engagement to accomplish a distance in a certain time, he was immediately drenched with Glauber

* "Training for Running, Walking, &c." By C. Westhall.

salts in large doses on alternate days, until the stomach was supposed to be sufficiently emptied, and after this, as frequently happens, should there be any symptom of feverishness or hardness about the region of the bowels, the additional misery of an emetic was forced upon him."

On the present plan a mild purgative is to be given at the commencement, and then severe exercise is to be gradually used, and the diet is restricted as much as possible to meat and stale bread and a little ale. In the summer we are to rise at six, have a bath (the preference is always given to cold bathing), take a cup of tea with a new laid egg beaten in it, then have an hour's walk quick enough to throw one into a glow, but not to make the skin moist. Then breakfast on "good mutton chop or cutlet, from half-a-pound upwards, according to appetite, with bread at least two days old, or dry toast,

washed down with a cup or two of good tea (about half-a-pint in all), with but little, and, if possible, no milk." Then a rest; then, to begin with, "a sharp walk of a couple of miles out, and a smart run home, is as much as will be advisable to risk." Then a cold shower bath, a thorough rub down, and dry clothes. "In a few days the pedestrian will be able to increase his distance to nearly double the first few attempts at a greater pace, and with greater ease to himself." Then he is to keep on the move till one o'clock, and then dine on "a good plain joint of the best beef or mutton with stale bread or toast, accompanied by a draught of good sound ale, the quantity of which, however, must be regulated by the judgment of the trainer." A small portion of fresh greens or potatoes is allowed. The quantity of ale should not exceed one pint. Then a thorough rest for an hour, then a stroll for an hour or two, and then

comes the tug of war. The pedestrian is now to "don his racing gear and shoes and practice his distance, or, at any rate, some portion of the same, whether he is training either for walking or running." A good hard rubbing succeeds, and the day's work is over. Then stale bread and tea, and if the appetite is good a new laid egg or two. A stroll, another rub, and then to early bed.

For a month or six weeks this plan of diet and exercise must be maintained in order to bring the body into good condition. Some relaxation must sometimes be made, but for more details I must refer to Mr. Westhall's very useful little manual.

CHAPTER V.

SLEEP.

“NATURE’S sweet comforter.” “Sleep that knits up the ravelled sleeve of care.” It is the great friend and companion of health.

“Why can no bard, with magic strain,
In slumbers steep the heart of pain?”

They cannot do it. Sleep is the appanage and dower of health. The idea of the ancient physicians as to the philosophy of sleep was very pretty.* *Est autem somnus nihil aliud quam animi in medium se recessus.* “Sleep is but the withdrawal of the mind within itself.” Those

* See “Paulus Ægineta” (Syd. Soc.); Art., Sleep.

powers which have been busy all day carrying on the campaign of life, directing the muscular movements, communicating, as it were, by electric telegraph, through the external senses with the outer world, setting the brain a fretting and fuming and raging and mourning,—these powers are thought in sleep to leave their posts, and to concentrate in some internal recesses, so that, for instance, those who sleep with their eyes open do not perceive the objects that are nearest to them.

They thought that the mind or vital principle might during sleep be more actively engaged in superintending digestion, &c. Many of these ancients therefore recommended a sleep after meals. The necessity for sleep arises out of the exhausted state of the nervous system.* Every exercise of thought and every

* Carpenter's "Physiology." Art., Sleep.

voluntary movement is believed actually to wear out and destroy particles of brain tissue, and such wear and tear requires complete rest for its perfect repair.

Sound deep sleep is far more refreshing than very light sleep that has lasted much longer. It is supposed that in the soundest sleep we do not dream. We awake in the morning and it seems as if we had only just gone to sleep. Such sleep is rare, and in general our fancy, relieved from its stern monitor the will, wanders unchecked, and builds up all strange airy castles, and mingles all things, sense and nonsense, fact and fiction, life and death.

The phenomenon of snoring has been thus explained—

“The goodly air on which we live and feed
Is wroth to be inhaled without heed,
And murmuring that it should be treated so
Through the melodious nose goes growling to and fro.”

Although the sleep which is full of dreams may not be quite so refreshing as

that rare sound dreamless sleep, yet it seems sufficiently refreshing for ordinary mortals, and we should sadly miss those nocturnal theatricals our dreams provide, albeit we have no "celestial patroness"

"Who deigns
Her nightly visitation unimplored,
And dictates to me slumbering, or inspires
Easy my unpremeditated verse."

But evil dreams are ill; they jar and disturb the weary brain that would fain be at rest. We wake unrefreshed and unfit for mental exertion. Such are nightmares, sore agonies, "fearful dreams of ugly sights." These are accompanied often by a sense of suffocation most distressing.

There are many points to be considered with regard to sleep. In childhood and early youth more sleep appears to be necessary than in manhood, in winter more probably than in summer.

Those who have a tendency to grow

too fat should take as little sleep as possible. Those who have already grown very fat are weak, and cannot do without much rest. The thin and active, the nervous, and especially the irritable and excitable, should take more sleep than they generally feel inclined to do.

Sleep is not a thing of so many hours to be regulated by some general rule, but every man may perceive for himself how much suits him and is necessary to him.

As a rule, those that labour hard require more sleep than those that are idle, yet we learn there have been many great workers with the brain who took very little sleep.

Too little sleep makes the mind irritable and excitable, and the body feverish and weak. Too much dulls the mind, relaxes and enfeebles all the tissues of the body, spoils the appetite, and is a common and fruitful cause of disease.

Moderate exercise in the open air is

favourable to sleep. The sea air is particularly conducive to sleep. A light supper appears to be better than either a heavy evening meal or none at all. All anxious thoughts and cares should, if possible, be laid aside before bedtime, and the mind cheered and amused. Mental anxiety, over fatigue, indigestion, a great supper, a horrible story told just before bedtime, all these may cause distressing dreams and nightmares.

Habit has a curious influence in inducing sleep. Some must have all quiet, the miller however sleeps best to the sound of his mill; the sailor is lulled by the noise of the winds and the waves; the officer at sea awakens if the heavy monotonous tread of the watch overhead ceases.*

It is probably a great thing for us, who have none of these things to sing our lullaby, to go to bed at regular hours,

* Carpenter's "Physiology." Art., Sleep.

not to say we will wait till we are sleepy; sleep will come, like a ghost, at the appointed time, and we must be ready for it.

There is another point to be considered in regard to sleep; and that is the question of the ventilation of our bed-rooms. We hear, very properly, a great deal in the present day of the necessity there is for plenty of pure air, and of the dangers of sleeping in a vitiated atmosphere; but there is another view of the question to be thought of. Sleep partakes of the nature of that half death in which some of the lower animals spend the winter, called hybernation. They retire from view, and seek some spot where they may be sheltered from cold and light and all disturbances; but we are not informed that they are solicitous as to the number of cubic inches of air they may have at their disposal. In our own case, during sleep the pulse, the respiration, and the temperature of the body, are all much

lower than when we are awake; we are living, in fact, more slowly, and resting from our battle with the elements; and experience tells us that moderate external warmth, and darkness and quiet, are conducive to sound sleep. A breeze playing on the surface of the face is one of the greatest stimulants to the respiration, and so far likely to disturb the quiet breathing which is part and parcel of deep sleep. The circulation during sleep is feeble, and the liability of the body to be chilled is great, and our climate is variable. We may go to bed with open windows on a hot night and awake on a raw cold morning; and people not very robust may find it is not only a cool breeze, but the icy hand of death that has entered in. I do not wish to be thought to dogmatize on this subject, but I cannot help thinking that except in extremely hot weather, or in the case of those who are hardened by long habit, it is more prudent, as well

as more philosophical, to keep the windows closed, and to be content with the milder ventilation of an open door and fire-place. The larger and loftier the bedroom is, however, of course the better; and in summer, at least, some staircase or passage-window may safely be left open to prevent the atmosphere of the house being too stagnant.

CHAPTER VI.

ON THE MAINTENANCE OF A HEALTHY
FRAME OF MIND.

IN this very comprehensive subject I shall content myself with referring to the very great value, in regard to health, of cheerfulness, and to the means of preserving that happy state of feeling, and with showing the necessity of properly exercising all the faculties of the mind.

Cheerfulness, then, seems almost an essential in the maintenance of health. Under its benign influence all the functions of the body seem to be performed in the most healthy way. The brain is clear and serene, the nerves are not irritable, the digestion—and consequently the nutrition of the body—goes on well, and we enjoy life.

Cheerfulness is to some extent constitutional. It is more often seen in the sanguine than in the bilious temperament; while those in whom the nervous temperament predominates, are so sensitive to mental and physical impressions that they can never keep long so placid and calm a companion as cheerfulness.

Yet cheerfulness must not be thought to smile on indolence. The very word cheery gives us the idea of briskness and activity. It is generally the companion of a well-regulated and industrious life, and a benevolent heart.

Cheerfulness is an unconscious offering to Heaven. Addison, in one of his beautiful papers on this subject, says he "cannot but look upon it as a constant habitual gratitude to the great Author of nature. An inward cheerfulness is an implicit praise and thanksgiving to Providence under all its dispensations. It is a kind of acquiescence in the state where-

in we are placed, and a secret approbation of the Divine will in His conduct towards man."

If our temperament, then, do not make us naturally cheerful, we must cultivate those habits of mind and body that seem most favourable to the growth of this happy state of feeling. We must keep our mind open to cheerful impressions, and close it to those that are gloomy. We must avoid solitude, and mix with our kind, and be sociable. Burton says "voluntary solitariness is that which is familiar with melancholy, and gently brings on, like a siren, a shooing-horn, or some sphinx, to this irrevocable gulf." And again: "Let him not be alone or idle (in any kind of melancholy), but still accompanied with such friends and familiars he most affects, neatly dressed, washed, and combed, according to his ability at least—in clean sweet linen—spruce, handsome, decent, in good ap-

parel ; for nothing sooner dejects a man than want, squalor, and nastiness, foul, or old clothes out of fashion."

We must not give ourselves up to gloomy thoughts of the future and draw pictures of want and misery in our old age, but pluck up heart of grace and go about our daily tasks rejoicing. Burton gives Æsop's old fable; the hares once, tired of living ever in fear of the huntsman and the hounds, went in a body to a pond to drown themselves, but a host of frogs showed such terror at the sight of these novel visitors, that the hares, seeing there were creatures more timid and wretched than themselves, felt their spirits revive, and went home rejoicing. I do not know, however, that it becomes us to allow the greater misery of others to be a source of comfort to ourselves.

And if we must not build up imaginary terrors, so we must not too much dread those changes that we cannot

escape. He that fears death dyeth many times over. Bacon says, "Men fear death as children fear to go into the dark, and as that natural fear in children is increased with tales so is the other;" and again, "as was well said, '*Pompa mortis magis terret quam mors ipsa.*' Groans and convulsions and a discoloured face, and friends weeping, and blacks, and obsequies, and the like show death terrible." "It is as natural to die as to be born, and to a little infant perhaps one is as painful as the other."

Providence has made the way easy for our exit from this stage, and the actual transition from life to death is seldom painful. But indeed it is not the passage over, but the new country, the "*nova res*," that we must needs take thought of, and on this subject I will not intrude. The undue fear of death is a cause of melancholy, and to be cast off if possible.

Again, we all have our little ills and

troubles that we magnify. Burton would have us think of the foxes, who, when they were going about lamenting the loss of their tails, which they had sacrificed to a temporary caprice of fashion, were reproved by the molewarpe or mole: "Why this fuss; look at me, I am blind." There are certain evils and passions whose very names or familiar surnames show them to be deadly enemies to health, and diligently to be shunned. "Infernal pain," "tumultuous Strife," "cruel Revenge," "heartburning Hate," "green or gnawing Jealousy," "wan Despair," "sharp Remorse." They leave a seared track in the brain, and they mar the features, for every expression is said to leave its stamp on the face.

"Laughing joy and sorrow sad,
Contentment calm and staid,
Horror pale, and frenzy mad,
Each its mark had made."

The passions uncontrolled are as "so

many wild horses run away with a chariot, and will not be curbed.”—(*Burton.*) They are like the winds and tempests that King Æolus keeps incarcerated.

“Uncontrolled indeed they would sweep away in their
wild flight
Heaven and earth, and the mighty deep, and whirl
them thro’ Chaos.”

I have before spoken of bodily exercise; to have mental health we must exercise the mind too; all its faculties grow stronger with use. The mental powers, like the bodily, have their gradual growth.

“For nature, crescent, does not grow alone
In thews, and bulk; but as this temple waxes,
The inner service of the mind and soul
Grows wide withal.”

And as it grows it must be fed with knowledge and trained. If not employed or wrongly directed it may go off the track to wrack and ruin. The mind is soon fatigued by work uncongenial to it;

but if we follow its bent, and set it tasks it likes, it rapidly developes and gains strength.

As those exercises that call into play all parts of the frame are the best; so with the mind: its different faculties, the imagination, the judgment, and the will must all be exercised, none allowed to run riot.

To him whose imagination is undeveloped, much of that pleasurable excitement that is so favourable to health must be for ever wanting. To him spring is a certain greenness, and autumn a certain yellowness of things; the "spacious firmament on high," a miscellaneous collection of more or less luminous bodies;

"The primrose on the river's brim
A yellow primrose was to him,
And it was nothing more."

His life is so far sad and dull. On the other hand, if the imagination be too much pampered and indulged it weakens

the whole character and unfits it for the stern tasks of life. If we live too much in an artificial world, that enticing world that poets, dramatists, and romancers have created, we may have to face the real world of life with an impaired judgment and an irresolute will. "The mind dances from scene to scene, unites all pleasures in all combinations, and riots in delights which nature and fortune, with all their bounty, cannot bestow." "By degrees the reign of fancy is confirmed, she grows first imperious, and in time despotic. Then fictions begin to operate as realities, false opinions fasten upon the mind, and life passes in dreams of rapture or of anguish."*

This is no overdrawn picture, and the condition of mind it portrays is indeed far removed from that state of composure

* Johnson's "Rasselas." See Abercromby "On the Intellectual Powers." Section on Imagination.

and self-control most favourable to health. The power of comparison, constituting judgment or reason, requires, it is obvious, due cultivation. I need hardly say the study of languages, of history, and of mathematics, society, business, and, if possible, travelling, are the well-understood means of developing this faculty.

Dr. Conolly, in his work on insanity, points out that it is not the high cultivation of the imagination, so much as the neglect of the other faculties of the mind, that tends to lead to impaired reason. While so many of our minor poets have suffered from this affliction, Shakspeare and Milton, who soar so high above them, never lost the serene balance of their minds; and we know they both had worldly matters enough to claim a share of their time and to call into exercise their judgment.

The due development of the faculty of the will is essential to the healthy state

of the mind, to a well-regulated life and a good conscience, and in every way to the health of the body.

All the faculties of the mind then must be duly cultivated, but not overstrained, lest we bring on disease as surely as we do by overtasking the bodily powers.

A composed and thankful frame of mind has much to do with giving a healthy hue to the face and with length of life. We can avoid being envious of the lot of others, and need not emulate the nightingale, who, they say, dies for shame if she hear another sing more sweetly than herself.

We must fill our state, mend it if we can, if it needs it; but in any case we must try to be content. And we must give our minds due amusement and recreation. Bacon says well "to be free minded and cheerfully disposed at hours of meat and sleep, and of exercise, is one of the best precepts of long last-

ing.” “Entertain hopes, mirth rather than joy, variety of delights rather than surfeit of them; wonder and admiration, and therefore novelty; studies that fill the mind with splendid and illustrious objects, as histories, fables, and contemplation of nature.”

A benevolent and kindly nature is very favourable to health, and such a nature can probably be acquired to a great extent by due cultivation.

CHAPTER VII.

CONCLUSION.

IN bringing this little work to a conclusion, I have at least the satisfaction of knowing I have been brief. I have escaped the fate of Evangelus, the piper, who piped so long that he killed himself.*

I have tried to point out clearly the importance of certain points in the management of health.

Proper diet, cleanliness, exercise and exposure to the air, due repose, and a well-regulated mind, seem simple matters; but in attention to such things lies the secret of health.

* Burton, quoting from Lucian.

It is easier, no doubt, to make or to take a pill of life, Parr's, Holloway's, Cockle's, whose not? But the only true *elixir vitæ* is to be sought in cultivating those habits of life that nature and experience commend.

“Some books are to be tasted, others to be swallowed, and some few to be chewed and digested.” May this Essay, whose bulk is small, be chewed and digested to the better health of him that devoureth.

But if those policemen of letters, the critics, take this little book in hand, let them do their spiriting gently.

I say with Spenser—

“Let not the skrieche-owl nor the stork be heard,
Nor the night raven that still deadly yells,
Nor damned ghosts, call'd up with mighty spells,
Nor griesly vultures, make us once affeard :
Ne let th' unpleasant quire of frogs still croking,
Make us to wish their choking.”

THE END.

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